

REMARKS

Claims 1-27 are currently pending in the subject application and are presently under consideration. In the Office Action of October 10, 2007, all claims were rejected. In the present response, Applicants traverse the rejections as follows.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1, 2, 4-6, 8, 11-16, 18-20, and 25-27 Under 35 U.S.C §103

Claims 1, 2, 4-6, 8, 11-16, 18-20, and 25-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo (US 7,184,767) in view of Cruz et al (US 2006/0046658). It was alleged that Gandolfo teaches a method of scheduling communications, comprising scheduling an inter-piconet transmission between first transmitting and receiving terminals (Figure 6c, the communication between A-2 and B-2) and scheduling an intra-piconet transmission between second transmitting and receiving terminals (Figure 3, devices 321 and 325 in communication with each other). It was admitted that Gandolfo fails to teach scheduling the power level for the inter-piconet and intra-piconet transmission that will satisfy the quality parameters of the receiving terminals and that Gandolfo does not teach that the intra-piconet transmission is scheduled simultaneously with the inter-piconet transmission. It was further alleged that Cruz teaches these features in paragraphs 0017 and 0099, and that it would have been obvious for one skilled in the art to combine the two references to arrive at Applicants' claimed subject matter.

Applicants do not believe that Gandolfo and Cruz teach each and every element of Applicants' claimed subject matter. For example, Applicants do not believe that Gandolfo teaches a method for scheduling communications between first and second terminals in an intra-piconet and scheduling communications between first and second terminals in an inter-piconet. In fact, Applicants do not believe that Gandolfo mentions anything at all about scheduling an intra-piconet communication or scheduling an inter-piconet communication.

It was alleged that Gandolfo teaches a method of scheduling communications in an inter-piconet in Figure 6c, between units A-2 and B-2. However, Figure 6c of Gandolfo simply teaches what is referred to as "indirect overlap", wherein two adjacent networks do not directly overlap, instead relying on a mutual "controller-enabled device" to allow two controllers (i.e.,

controller A and controller B) to communicate with each other. (See Gandolfo, column 11, lines 21-46). There is no mention of scheduling communications whatsoever in the discussion of Figure 6c, or anywhere else within Gandolfo for that matter.

It was further alleged that Gandolfo teaches scheduling an intra-piconet communication between terminals 321 and 325 in Figure 3. Applicants contend that Figure 3 simply illustrates a generic piconet, comprising a controller and several communication devices. A full description of Figure 3 can be found in column 2, lines 26-54. This description simply discusses the general nature of a piconet; that is, a controller in communication with several wireless devices. Each device is able to communicate with the controller and/or other devices within the piconet. However, there is no teaching or suggestion of how these devices communicate with each other and, more specifically, no teaching or suggestion that the communications within the piconet are scheduled in any fashion.

Based on the above discussion, Applicants do not believe that Gandolfo teaches anything with regard to the scheduling of communications, either within a piconet or between piconets. Therefore, the rejection under 35 U.S.C. §103(a) should be withdrawn.

Applicants also believe that the rejection to these claims based on 35 U.S.C. §103(a) must fail because Cruz fails to teach or suggest scheduling power levels for the inter-piconet and intra-piconet transmissions that satisfies quality parameters of receiving terminals and further fails to teach or suggest that the intra-piconet transmission is scheduled simultaneously with the inter-piconet transmission.

It was alleged that Cruz teaches scheduling power levels for the inter-piconet and intra-piconet transmissions that satisfies quality parameters of receiving terminals in paragraph 0017. However, Applicants can find no mention of scheduling power levels that satisfies quality parameters of receiving terminals. Cruz teaches the determination of an “optimal schedule that provides for the base-case goal for a given parameter”, one of the parameters being “the total power” where the total power is minimized for the network. Thus, the power levels discussed in Cruz only provide for determining power levels based on not individual receivers, but on a total power goal of the entire network. Therefore, Cruz fails to teach or suggest the feature of scheduling power levels based on quality parameters of receiving terminals, as required in independent claims 1, 11, 13, and 25, and the rejection should be withdrawn.

It was alleged that Cruz teaches “that the intra-piconet transmission is scheduled simultaneously with the inter-piconet transmission” in paragraph 0099. Cruz teaches “We find that for very low data rates (between 0 to 41 MBPS in Fig. 3) it is energy efficient to enable all the 16 clusters simultaneously, regardless of the value of thermal noise.” (Cruz, paragraph 0099). Applicants do not believe that enabling multiple clusters simultaneously can be equivalent to simultaneous scheduling, as claimed by Applicants. Further, Applicants do not believe that Cruz teaches or suggests simultaneous scheduling of intra and inter piconet *transmission*. Cruz simply states that all 16 clusters are *enabled* simultaneously. There is no teaching or suggestion that all 16 clusters are scheduled for simultaneous transmission, only that they are enabled simultaneously. Therefore, Applicants believe that the rejection under 35 U.S.C. 103(a) must fail because neither Cruz nor Gandolfo teaches all of the elements of Applicants’ claims.

Regarding the rejection to all dependent claims, Applicants believe they are all allowable as being dependent on allowable claims, namely claims 1, 11, 13, and 25.

II. Rejection of Claims 3 and 17 Under 35 U.S.C. §103(a)

Claims 3 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo in view of Cruz and further in view of Agrawal et al (US 6,072,990). It was alleged that Gandolfo and Cruz teaches all of the claim elements of claim 1, and that Agrawal discloses a method that measures the quality of a transmission using various channel quality metrics such as carrier-to-interference ratio in column 1, lines 27-37.

Applicants do not believe that Gandolfo and Cruz teach all of the limitations of claims 1 and 13, as discussed above with respect to the rejection of claims 1, 2, 4-6, 8, 11-16, 18-20, and 25-27 under 35 U.S.C. §103(a). Therefore, Applicants believe that claims 3 and 17 are allowable as being dependent on allowable claims, namely claims 1 and 13.

III. Rejection of Claims 7 and 21 Under 35 U.S.C. §103(a)

Claims 7 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo in view of Cruz and further in view of Palin et al (US 2003/0083015). It was alleged that Gandolfo and Cruz teaches all of the claim elements of claims 1 and 13, and that Palin discloses a method of scheduling and measuring power levels based on power loss information in paragraphs 0042 and 0044.

Again, Applicants do not believe that Gandolfo and Cruz teach all of the limitations of claims 1 and 13, as discussed above with respect to the rejection of claims 1, 2, 4-6, 8, 11-16, 18-20, and 25-27 under 35 U.S.C. §103(a). Therefore, Applicants believe that claims 7 and 21 are allowable as being dependent on allowable claims, namely claims 1 and 13.

IV. Rejection of Claims 9 and 23 Under 35 U.S.C. §103(a)

Claims 9 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo in view of Cruz and further in view of Umeda et al (US 5,920,817). It was alleged that Gandolfo and Cruz teaches all of the claim elements of claims 1 and 13, and that Umeda discloses a method where a device is capable of communicating with n different elements using different spreading codes in column 7, lines 6-27.

Again, Applicants do not believe that Gandolfo and Cruz teach all of the limitations of claims 1 and 13, as discussed above with respect to the rejection of claims 1, 2, 4-6, 8, 11-16, 18-20, and 25-27 under 35 U.S.C. §103(a). Therefore, Applicants believe that claims 9 and 23 are allowable as being dependent on allowable claims, namely claims 1 and 13.

V. Rejection of Claims 10 and 24 Under 35 U.S.C. §103(a)

Claims 10 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gandolfo in view of Sun et al (Interference-aware MAC scheduling and SAR policies for Bluetooth scatternets). It was alleged that Gandolfo teaches all of the claim elements of claims 10 and 24, except that Gandolfo fails to teach that no intra-piconet transmissions are scheduled simultaneously with the inter-piconet transmission. It was further alleged that Sun teaches a method where the inter-piconet and intra-piconet transmissions are not simultaneous because the slave nodes take turns in transmitting information (page 11, from left column 44 to right column, line 21, and 27-29; page 13, left column, lines 28-31, and right column, lines 29-39). It was then alleged that it would have been obvious for one skilled in the art to combine the two references to arrive at Applicants' claimed subject matter.

Applicants do not believe that Gandolfo teaches all of the claim elements of claims 10 and 24 with the exception of non-simultaneous transmissions between intra and inter piconets. For example, claims 10 recites "receiving in a first piconet information relating to a scheduled inter-piconet transmission from a second piconet". Claim 24 recites a similar feature: "a receiver

configured to receive information relating to a scheduled inter-piconet transmission from a second piconet”. Gandolfo fails to teach these features, as explained below.

Applicants do not believe that Gandolfo teaches or suggests receiving information relating to scheduling an intra or an inter piconet communication. As explained above, Gandolfo simply teaches what is referred to as “indirect overlap”, wherein two adjacent networks do not directly overlap, instead relying on a mutual “controller-enabled device” to allow two controllers (i.e., controller A and controller B) to communicate with each other. (See Gandolfo, column 11, lines 21-46). There is simply no mention of scheduling transmissions whatsoever anywhere within Gandolfo for that matter.

A general description of piconets is given in Gandolfo column 2, lines 26-54. This description discusses the general nature of a piconet; that is, a controller in communication with several wireless devices. Each device is able to communicate with the controller and/or other devices within the piconet. However, there is no teaching or suggestion of how these devices communicate with each other and, more specifically, no teaching or suggestion that the communications within the piconet are scheduled in any fashion.

Applicants believe that the rejection to claims 10 and 24 should be withdrawn based solely on the arguments presented above, because Gandolfo fails to teach that transmissions are scheduled in either an intra or an inter piconet communication system.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.[QUALP841US]

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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